



PATENT APPLICATION 10/711,517
Docket No.: 054030-0066

UNITED STATES PATENT AND TRADEMARK OFFICE

First Applicant: **ABBOTT, Nicholas L.**
Application No: **10/711,517** Filing Date: **September 23, 2004**
Group Art Unit: **1641** Examiner: **Christine E. Foster**

For: **USING LIQUID CRYSTALS TO DETECT AFFINITY
MICROCONTACT PRINTED BIOMOLECULES**

<p>MAIL STOP AMENDMENT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450</p>	<p><u>CERTIFICATE OF MAILING UNDER 37 CFR 1.8</u></p> <p>I hereby certify that this correspondence is being facsimile transmitted or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 21, 2006.</p> <p>By: <u><i>Amy L. Progar</i></u> Name: <u>Amy L. Progar</u></p>
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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- ☐ under 37 CFR 1.129(a), or
(First/Second submission after Final Rejection)
- ☐ under 37 CFR 1.97(b), or
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).
- ☒ under 37 CFR 1.97(c) together with either:
☐ a Statement under 37 CFR 1.97(e), as checked below, or
☒ a \$180.00 fee under 37 CFR 1.17(p), or
(More than 3 months after receipt of the International Search Report, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with:
☐ a Statement under 37 CFR 1.97(e), as checked below, and
☐ a \$180.00 fee under 37 CFR 1.17(p), or
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)
- ☐ under 37 CFR 1.97(i):
Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper. (Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

Enclosed herewith is form PTO-1449:

- ☐ Copies of the Supplementary Search Report in a counterpart International application are enclosed.
- ☐ In accordance with 37 C.F.R. § 1.98 (d), copies of cited references (*list reference not enclosed*) are not enclosed as these references were entered in earlier application, U.S. Application No. [], to which the present application claims priority under 35 U.S.C. 120. The earlier application contains copies of the cited references.
- ☐ If copies of references [*list references not enclosed*] would benefit the Examiner of this case, the Examiner is invited to call the undersigned attorney and copies will be forwarded immediately.
- ☒ Copies of listed references **S1-S15** are enclosed.

Concise Explanation Requirement (non-English references):

- ☐ The "concise explanation" requirement (non-English references) for reference(s) [] under 37 CFR 1.98(a)(3) is satisfied by:
 - ☐ the explanation provided on the attached sheet.
 - ☐ the explanation provided in the Specification.
 - ☐ submission of the enclosed International Search Report.
 - ☐ the enclosed English language abstract.

☐ Applicant requests that the following pending applications be considered:

Examiner's
Initials

____ U.S. Patent Application No. [], Publication No. [], Publication Date [],
by [inventor(s)], filed [], Docket No.: []

____ U.S. Patent Application No. [], Publication No. [], Publication Date [],
by [inventor(s)], filed [], Docket No.: []

____ U.S. Patent Application No. [], Publication No. [], Publication Date [],
by [inventor(s)], filed [], Docket No.: []

Examiner

Date

☐ A copy of each above-cited application, including the current claims, is enclosed.

☐ A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

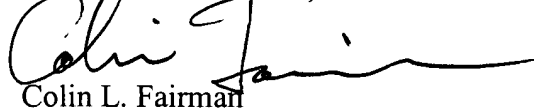
☐ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.

☒ Please charge Deposit Account No. 07-1509 in the amount of \$ 180.00.

☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account No. 07-1509.

Respectfully Submitted,

GODFREY & KAHN, S.C.



Colin L. Fairman

Registration No. 51,663

Date: February 21, 2006

Attorney of Record for Applicant

GODFREY & KAHN, S.C.

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Milwaukee, WI 53202-3590

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MN266330_1.DOC

Substitute For Form 1449/PTO				ATTORNEY DOCKET NO. 054030-0066		APPLICATION NO. 10/711,517	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION (February 21, 2006) (Use several sheets if necessary)				APPLICANT ABBOTT, Nicholas L.			
				FILING DATE September 23, 2004		GROUP ART UNIT 1641	
U.S. PATENT DOCUMENTS							
EXAM- INER INI- TIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
		NONE					
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
		NONE					
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	S1.	CHUNG, Doo-Han et al., <i>Alignment Mechanism of Nematic Liquid Crystal on Rubbed Polymer Surface Studied by Subsequent Processes of Rubbing and Photoalignment</i> , Japanese Journal of Applied Physics, Vol. 39, Part 2, No. 3 A/B, March 15, 2000, pp. L185-L187.					
	S2.	COCCHI, J.M. et al., <i>Comparison Between Direct Binding, Competition and Agglutination Assays in the Characterization of Polyclonal Anti-Idiotypes Against Anti-HBs Human Monoclonal Antibodies</i> , Journal of Immunological Methods, Vol. 160, 1993, pp. 1-9.					
	S3.	GUPTA, Vinay K. et al., <i>Using Isotropic, Nematic, and Smectic Fluids for the Study of Self-Assembled Monolayers Formed from Alkanethiols on Gold</i> , Chemistry of Materials, Vol. 8, Issue 7, 1996, pp. 1366-1369.					
	S4.	HARLOW, Ed and LANE, David, <i>Antibodies – A Laboratory Manual</i> , Cold Spring Harbor Laboratory, 1988, Contents pp. iii-ix.					
	S5.	KIM, Seung-Ryeol and ABBOTT, Nicholas L., <i>Rubbed Films of Functionalized Bovine Serum Albumin as Substrates for the Imaging of Protein-Receptor Interactions Using Liquid Crystals</i> , Advanced Materials, Vol. 13, Issue 19, October 2, 2001, pp. 1445-1449.					
	S6.	KUBY, Janis, <i>Uses for Monoclonal Antibodies</i> , Immunology, W.H. Freeman and Company, 1992, Chapter 7, pp. 147-151.					
	S7.	MIKAMI, Naoko and HONMA, Masao, <i>Ferroelectric Liquid Crystal Alignment Films Utilizing Poly(DL-amino acid)s and Fibrous Proteins</i> , Kobunshi Ronbunshu, Vol. 56, Issue 6, 1999, pp. 396-400.					
	S8.	RENAULT, Jean Philippe et al., <i>Fabricating Microarrays of Functional Proteins Using Affinity Contact Printing</i> , Angewandte Chemie-International Edition, Vol. 41, Issue 13, 2002, pp. 2320-2323.					
	S9.	ROGERS, John A. et al., <i>Printing Process Suitable for Reel-to-Reel Production of High-Performance Organic Transistors and Circuits</i> , Advanced Materials, Vol. 11, Issue 9, 1999, pp. 741-745.					
	S10.	SCHMITT, F.J. et al., <i>Surface Plasmon Studies of Specific Recognition Reactions at Self-Assembled Monolayers on Gold</i> , Thin Solid Films, Vol. 210/211, Issue 1-2, April 30, 1992, pp. 815-817.					
	S11.	TIZARD, Ian R., <i>Veterinary Immunology: An Introduction</i> , W.B. Saunders Company, 1996, Contents pp. xv-xxiv.					
	S12.	VAN OSS, Carel J. and VAN REGENMORTEL, Marc H.V., <i>Immunochemistry</i> , Marcel Dekker, Inc., 1994, Contents pp. v-vii.					



INFORMATION DISCLOSURE CITATION IN AN APPLICATION (February 21, 2006) (Use several sheets if necessary)		ATTORNEY DOCKET NO. 054030-0066	APPLICATION NO. 10/711,517
		APPLICANT Wisconsin Alumni Research Foundation	
		FILING DATE September 23, 2004	GROUP ART UNIT 1641
		OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) (cont.)	
S13.	XIA, Younan et al., <i>Microcontact Printing with a Cylindrical Rolling Stamp: A Practical Step Toward Automatic Manufacturing of Patterns with Submicrometer-Sized Features</i> , Advanced Materials, Vol. 8, Issue 12, 1996, pp. 1015-1017.		
S14.	YANG, Jean Y. et al., <i>Binary Self-Assembled Monolayers: Spectroscopy and Application to Liquid Crystal Alignment</i> , Microchemistry – Spectroscopy and Chemistry in Small Domains, 1994, pp. 441-454		
S15.	YANG, Kun-Lin et al., <i>Contact Printing of Metal Ions onto Carboxylate-Terminated Self-Assembled Monolayers</i> , Advanced Materials, Vol. 15, Issue 21, November 4, 2003, pp. 1819-1823.		



PTO/SB/17 (01-06)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL

For FY 2006

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180

Complete if Known

Application Number	10/711,517
Filing Date	September 23, 2004
First Named Inventor	ABBOTT, Nicholas L.
Examiner Name	FOSTER, Christine E.
Art Unit	1641
Attorney Docket No.	054030-0066

METHOD OF PAYMENT (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: 07-1509 Deposit Account Name: Godfrey & Kahn, S.C.

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION** (All the fees below are due upon filing or may be subject to a surcharge.)**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES**Fee Description**

	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
- 20 or HP =	x	=	

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
- 3 or HP =	x	=	

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	=	

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Supplemental IDS Under 37 CFR 1.97(c)

Fees Paid (\$)

180

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 51,663	Telephone 608-284-2622
Name (Print/Type)	Colin L. Fairman		Date February 21, 2006

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

127

Application Number

10/711,517

Filing Date

September 23, 2004

First Named Inventor

ABBOTT, Nicholas L.

Art Unit

1641

Examiner Name

FOSTER, Christine E.

Attorney Docket Number

054030-0066

ENCLOSURES (Check all that apply)



Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)



Reply to Missing Parts/
Incomplete Application



Reply to Missing Parts
under 37 CFR 1.52 or 1.53



Drawing(s)



Licensing-related Papers



Petition



Petition to Convert to a
Provisional Application



Power of Attorney, Revocation



Change of Correspondence Address



Terminal Disclaimer



Request for Refund



CD, Number of CD(s) _____

☐ Landscape Table on CD



After Allowance Communication to TC



Appeal Communication to Board
of Appeals and Interferences



Appeal Communication to TC
(Appeal Notice, Brief, Reply Brief)



Proprietary Information



Status Letter



Other Enclosure(s) (please identify
below):

Supplemental Information Disclosure
Statement

Return Receipt Postcard

Remarks

Supplemental Information Disclosure Substitute Form 1449 and References S1-S15.

Fee Transmittal Form (2 copies).

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name

Godfrey & Kahn, S.C.

Signature

Printed name

Colin L. Fairman

Date

February 21, 2006

Reg. No.

51,663

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature

Typed or printed name

Amy L. Progar

Date

February 21, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.